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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,727	12/27/2001	Yuichiro Yamazaki	02887.0212	1979

7590 09/16/2003

Finnegan, Henderson, Farabow,  
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1300 I Street, N.W.  
Washington, DC 20005-3315

EXAMINER
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EL SHAMMAA, MARY A

ART UNIT	PAPER NUMBER
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2881

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/026,727

Applicant(s)

YAMAZAKI ET AL.

Examiner

Mary A. El-Shammaa

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 6/17/03.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7,8,10-13,15,17 and 19 is/are rejected.
- 7) ☒ Claim(s) 2,4,6,9,14,16,18 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 17 June 2003 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 5, 7-8, 10-13, 15, 17, and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kohama (6,518,582).

Regarding claims 1, 3, 7-8, 10-13, 15, and 19, Kohama discloses in Figs. 1-13 a substrate inspection system (10) housed in a vacuum vessel and a method of controlling the inspection system comprising a substrate mounting part (28) which mounts thereon a substrate (15) to be inspected; a charged particle beam irradiation part (21) which generates a charged particle beam (B1) to irradiate the substrate with the charged particle beam, the irradiation of the charged particle beam causing a secondary charged particle and/or a reflected charged particle (B2) to generate from the substrate; an electron image detecting part which detects an electron image which is formed by the secondary charged particle and/or the reflected charged particle and is indicative of a physical property of the surface part of the substrate and outputs a picture signal of the image; said electron image detecting part including a charged particle multiplying device (43) which multiplies the secondary charged particle and/or the reflected charged particle, and an image grabbing element including a TDI type CCD element (45) and having a fluorescent body

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(44) which receives the multiplied secondary charged particle and/or the reflected charged particle as the electron image and which converts the electron image into an optical image, said image grabbing element converting the optical image into the picture signal; said charged particle multiplying device having an entrance surface through which the secondary charged particle and/or the reflected charged particle enter said charged particle multiplying device; said fluorescent body having a light receiving surface which receives the multiplied secondary charged particle and/or the reflected charged particle and a fluorescent surface on which the optical image appears; a mapping projecting part (47, 48) which projects the secondary charged particle and/or the reflected charged particle in some degree of magnification on said electron image detecting part; an inspection part which inspects the substrate on the basis of the picture signal; and a control part which controls said mapping projecting part and causes said fluorescent surface of said fluorescent body to be grounded and which applies a first negative potential to the entrance surface of said charged particle multiplying device (Col. 6, Line 44 through Col. 7, Line 33; Col. 7, Line 60 through Col. 8, Line 12; Col. 9, Lines 5-26; Col. 12, Lines 4-52; Col. 13, Line 6-11; Col. 13, Line 60 through Col. 14, Line 31; col. 16, Lines 27-31).

Regarding claims 5 and 17, Kohama discloses a substrate inspection system and method of controlling the system wherein the mapping projecting part includes three-stage electrostatic lenses (23) that are provided in the vicinity of the electron image detecting part, of the three-stage electrostatic lenses a first-stage electrostatic lens being positioned nearest to the substrate mounting part, a third-stage electrostatic lens being positioned nearest to said charged particle multiplying device, and a second-stage electrostatic lens being positioned between the first-stage electrostatic lens and the third-stage electrostatic lens, and the control part causes the first-stage

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electrostatic lens to be grounded, applies the first negative potential to the third-stage electrostatic lens and applies a third negative potential to the second-stage electrostatic lens, the absolute value of the third negative potential being smaller than the absolute value of said first negative potential (Col. 7, Lines 19-42; Col. 8, Lines 6-67).

***Allowable Subject Matter***

Claims 2, 4, 6, 9, 14, 16, 18, and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary A. El-Shammaa whose telephone number is 703.308.0851. The examiner can normally be reached on M-F (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on 703.308.4116. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.872.9317.

MAE  
September 5, 2003

  
JOHN R. LEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800